

# Amana Technical Information—Gas Range

**ARG7102** P1143338N, P1143341N, P1143344N, P1143347N, P1143370N  
P1143389N, P1143399N

**ARG7302** P1143337N, P1143343N, P1143368N, P1143391N

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- This technical sheet replaces RT2310005 Rev. 5.
- Refer to Service Manual RS2310002 for detailed installation, operating, testing, troubleshooting, and disassembly instructions.
- Refer to Parts Manuals RP2320042 and RP2310044 for part number information.



## CAUTION

All safety information must be followed as provided in Service Manual RS2310002.



## WARNING

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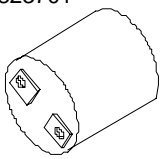

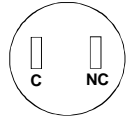
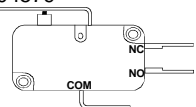
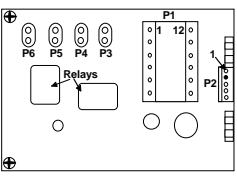
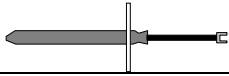
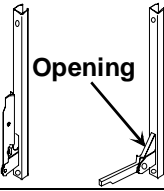

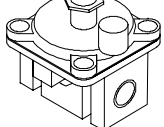

Models	ARG7102	ARG7302
<b>Power Source</b>		
Electrical rating	120 VAC	120 VAC
Amperage	15 Amp	15 Amp
Frequency	60 Hz	60 Hz
<b>Water Column Pressure</b>		
Natural	6 in. W.C.P.	6 in. W.C.P.
LP/Propane	10 in. W.C.P.	10 in. W.C.P.
<b>Surface Burner (BTU Nat./LP)</b>		
Two burners		9,700/8,000
Four burners	9,700/8,000	
Two burners		12,500/10,000
<b>Oven Burner (BTU Nat./LP)</b>		
Bake	15,500/15,500	15,500/15,500
Insta-Broil™	14,000/13,000	14,000/13,000
<b>Oven Interior Dimensions in. (cm)</b>		
Height	16 (41)	16 (41)
Width	23 (58)	23 (58)
Depth	17 1/2 (44)	17 1/2 (44)
<b>Product Exterior Dimensions in. (cm)</b>		
Height overall	47 (119)	47 (119)
Width	30 (76)	30 (76)
Depth oven door closed with handle	28 1/4 (72)	28 1/4 (72)
Clearance oven door	20 (51)	20 (51)
Height of cooktop	36 (91)	36 (91)
<b>Weight lbs. (kg)</b>		
Approximately shipping weight	171 (78)	171 (78)
<b>Features</b>		
High performance sealed burners	X	X
Square wire/cast iron burner grates	Wire grates	Cast iron
Frameless glass door with window	X	X
Interior oven light	X	X
Two oven racks—5 positions	X	X
Exclusive Insta-Broil™ system	X	X
Removable full width storage drawer	X	X
Self-cleaning porcelain oven	X	X
Eaton electronic range control—KRC	X	X

# Component Testing Procedures



## WARNING

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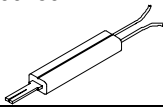
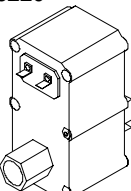


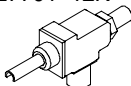


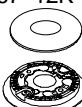
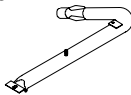
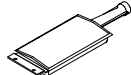
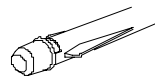
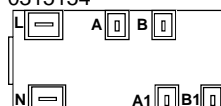
Illustration	Component	Test Procedure	Results
31823701 	Oven light socket	Test continuity of receptacle terminals.  Measure voltage at oven light.	Indicates continuity with bulb screwed in.  120 VAC, see wiring diagram for terminal identification. If no voltage is present at oven light, check wiring.
0063997 	Rocker switch	Measure voltage at rocker switch to chassis.	120 VAC, see wiring diagram for terminal identification.
0314367 	Door plunger switch (if so equipped)	Remove switch from unit and measure the following point: C-NC	Plunger in infinite, Plunger out continuity.
0304579 	Hi temperature latch switch	Test for voltage at terminals to chassis when in bake, broil, or clean mode. COM to chassis Only when latch is engaged: NO to chassis	120 VAC  120 VAC
31864501 	Eaton electronic range control-KRC	Measure voltage at terminals: P3 (L1) and P4 (NEU)  Remove leads and measure for continuity.  Drive requirements Bake Broil Clean Stage 1 Stage 2 Time  F2-Oven over temperature F3-Open oven temperature sensor F4-Shorted oven temperature sensor FFF-Control failure	120 VAC should be indicated.  See schematic.  100% bake element 100% broil element  Time controlled 30 minutes 100% broil 100% bake 4 hours with last 30 minutes for cool  Verify voltage to clock. If no voltage is present, check wiring. If voltage is present, replace clock.
0314907 	Sensor, Oven Temperature	Measure resistance.	Approximately 1100 $\Omega$ at room temperature 75°F.
31715201-LH 0317068-RH 	Hinge	Carefully open the hinge fully, and insert a wooden dowel or screwdriver bit into opening. Remove top and bottom screws securing hinge. Slide hinge top towards rear of unit and guide hinge out through frame opening or storage drawer.	<div style="border: 1px solid black; padding: 5px;"> <b>CAUTION</b></div> Do not place hands in hinge area when oven door is removed. Hinge can snap closed and pinch hands or fingers.
0308866 	Pressure regulator	Verify gas pressure (WCP).  If on LP service verify proper gas supply conversion.	6" Natural 10" LP/propane <div style="border: 1px solid black; padding: 5px;"> <b>WARNING</b></div> To avoid risk of fire, always test for leaks after a gas component repair.

# Component Testing Procedures



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Illustration	Component	Test Procedure	Results
31940001–Bake 31939901–Broil 0309159 	Norton ignitor	Test for voltage at terminals.  Test for the amount of amperage in the circuit. (Ignitor may glow but not have sufficient amperage to open valve).	120 VAC  3.2– 3.6 Amps.
0316220 	Gas valve	Disconnect wiring to valve. Measure resistance on bake circuit. Measure resistance on broil circuit.	Continuity Continuity <div>  <b>WARNING</b>            Do not attempt to open valve with 120 VAC.         </div>
0306428 	Shut off valve	Check to verify gas supply is turned on.	
31742501–9K 31727701–12K 	90° valve	Verify gas is supplied.  Orifice adjusted for Natural or LP.	
0316538 	Spark 90° switch	Test for voltage at terminals.  Disconnect wiring and check for continuity in LITE position.	120 VAC  Continuity in LITE position.
0316773 	Spark ignition electrode	Test for resistance of spark lead.  Test ignitor to chassis.	Continuity  No continuity from ignitor to chassis.
0315768–9K 0315767–12K 	Top surface burner	Verify gas is supplied.  Verify burner cap is positioned correctly.  Check for obstructions in burner ports.	
0316211 	Bake burner	Verify gas is supplied.  Orifice adjusted for Natural or LP. Check for obstructions or contamination in ports.	
0060691 	Broil burner	Verify gas is supplied.  Proper orifice installed for Natural or LP. Check for damage to screen.	Replace if punctured or torn.
	Venturi	Shutter settings: Nominal Tol. ±	.125" 1/8" .031" 1/32"
0315154 	Spark module 4 + 0	Test for voltage at terminals L and N.	120 VAC See wiring diagram.

# Component Specifications



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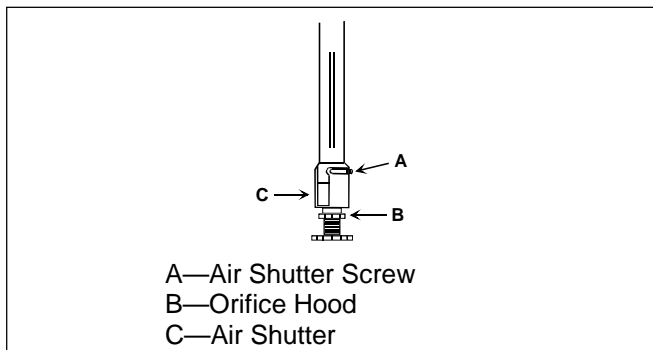
### Converting from Natural Gas to LP Gas

#### Converting the Insta-Broil™

1. Remove or open oven door.
2. Remove screws securing Insta-Broil™ bracket.
3. Remove burner carefully, avoid damaging the ignitor to expose burner spud. Remove the #52 natural gas burner spud using a 5/16 socket wrench. Save #52 spud to reconvert if necessary in the future.
4. Install the #58 LP/propane spud (wired to inlet pipe).
5. Replace Insta-Broil™ burner and holding screws.

#### Converting Oven Burner for Use with LP/Propane

1. Remove storage drawer.
2. Locate and remove 2 screws attaching Z-shaped cover plate.
  - Cover plate located in center, rear of storage drawer cavity.
  - Removing cover plate exposes oven burner orifice and air shutter.

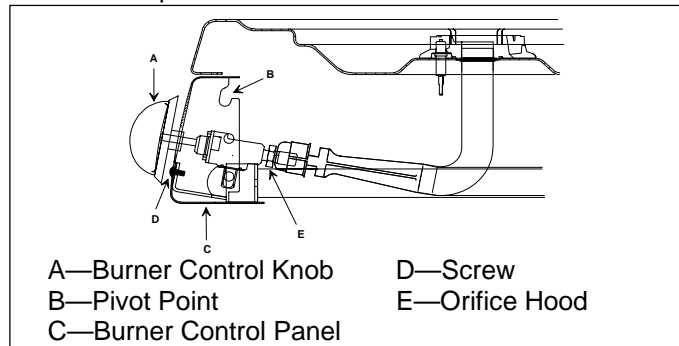


3. Turn orifice hood clockwise until snug.
  - Do not over tighten orifice hoods. Orifice hoods can damage LP pin.
4. Replace cover plate and storage drawer.

#### Converting Surface Burners for Use with LP/Propane

1. Remove 4 burner control knobs from range.
  - Expose 2 screws on burner control panel.
2. Remove 2 screws from burner control panel.
  - Panel drops slightly after screws are removed.
3. Grasp bottom of burner control panel, gently lift and pull out panel until clear of burner valve stems.

- After burner control panel clears valve stems, continue to roll panel until free from range. Set aside.
- Gas valve and orifice hood are visible after burner control panel is removed.



4. While facing range front, turn orifice hoods counterclockwise  $1\frac{1}{2}$  to 2 turns or until snug.
  - Use  $\frac{1}{2}$  inch open end or 90° offset open end wrench.
  - Do not over tighten orifice hoods. If orifice hoods are over tightened, gas supply can be cut off or orifice hoods can damage LP pin.
5. Reassemble burner control panel after adjusting air shutter.

#### Converting Pressure Regulator for LP/Propane

1. Remove pressure regulator cap using a 7/8 inch wrench.
2. Reverse pressure regulator cap.
  - Cap must show "LP".
3. Place pressure regulator cap on pressure regulator and tighten.

### Adjusting Burner Flame

Properly adjusted burner flames are clean and blue with a distinct inner cone approximately  $\frac{1}{2}$  inch long.

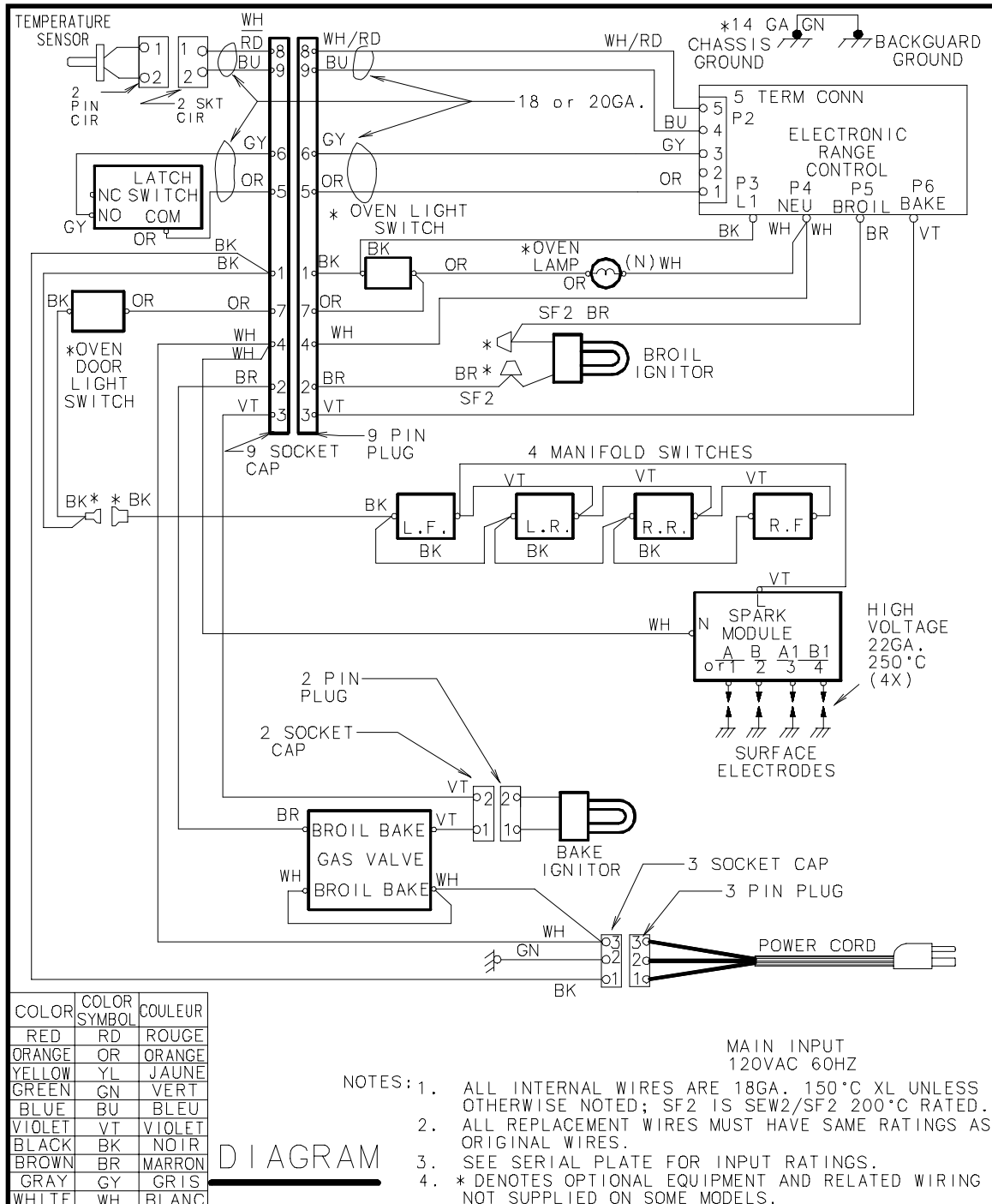
- If burner flame is blowing or noisy, reduce airflow to burner.
- If burner flame is yellow and does not hold its shape, increase airflow to burner.

# Wiring Diagram and Schematic



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**WARNING** - ELECTRICAL SHOCK HAZARD  
FUSE OR CIRCUIT BREAKER BEFORE SERVICING.  
FAILURE TO DO SO COULD RESULT IN SERIOUS  
INJURY OR DEATH.

**DANGER** - RISQUE DE CHOC ELECTRIQUE  
-DEBRANCHER L'ALIMENTATION ELECTRIQUE.  
AVANT D'ENTREtenir CETTE UNITE.  
LE MANQUE DE RESPECT DE CETTE CONSIGNE POURRAIT  
AVOIR COMME RESULTAT UNE BLESSURE GRAVE OU MORTELLE

# Component Specifications



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